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Watch for New Cotton Insects

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CHICKEN HILL, TEXAS





THE SPINY BOLLWORM

The adult spiny bollworm (*Earias insulana*) is a moth that has a wingspan of $\frac{3}{4}$ to 1 inch. Its forewing usually is grass green; its hindwing is white.

The female lays about 400 tiny bluish-green eggs on shoots, stalks, flower huds, and bolls. The eggs hatch in 4 to 7 days.

The newly hatched larva is brownish white and has a dark brown head. Orange-yellow "spines," or tubercles, are prominent on its back.

The full-grown larva is about $\frac{3}{4}$ inch long. It is greenish white and is covered with black and orange dots on the back. Most segments have two pairs of "spines."

The pupa is purplish brown and is enclosed in a tough, dirty-white to light-brown silk cocoon.

Damage is caused by the larvae, which enter the shoots, stalks, flower buds, stems, and bolls. The larvae feed for 9 to 16 days, moving from one plant to another.

In warm climates, the spiny bollworm breeds almost continuously; thus cotton plants seldom are free from attack.



COTTON JASSID

The cotton jassid (*Empoasca lybica*) is a leafhopper similar to the potato leafhopper of the United States. The adult is light green and about $\frac{1}{8}$ inch long. Its wings are light green or golden yellow. The female lays eggs in the leaves, particularly on the underside along the main vein. The eggs hatch in 1 to 3 weeks. The newly hatched nymph is whitish but changes to yellowish green. Up to 8 generations a year may develop.

Damage: The cotton jassid sucks sap from the leaves and causes heavy damage to cotton. First signs of damage are discoloration along the midribs and veins of the leaves, and curling and drying of the leaves—a condition called hopperburn.



RED BOLLWORM

The adult red bollworm (*Diparopsis castanea*) is purplish pink and has whitish hindwings. Its wingspread is about 1 inch, and its body is stout.

The female deposits sky-blue eggs on stems and green parts of the cotton plant.

The larva is about 1 inch long when fully grown. It is green and has rose-red markings and black spines.

The red bollworm produces 3 to 5 generations a year.

Damage is caused by the larvae, which prefer green bolls but can mature on the flower buds. After larvae bore into the boll, they usually remain there and seldom are seen outside the boll.



EGYPTIAN COTTONWORM

The adult Egyptian cottonworm (*Spodoptera litura*) is a moth that has a wingspread of about $1\frac{1}{4}$ inches. Its head and back are whitish tinted with pale red. Forewings are yellowish brown and have white markings. Hindwings are white and have light-brown markings.

The larva is about $1\frac{1}{2}$ inches long when fully grown. In late stages of development it is brown and has triangular dark-brown blotches on the sides of each body segment.

The pupa is reddish brown, and is enclosed in a tough light-brown cocoon.

In warm climates the Egyptian cottonworm breeds almost continuously; consequently, the plants seldom are free from attack. Up to 7 generations a year may develop.

Damage is caused by the larvae, which feed on cotton. Young larvae tend to crowd on one or two leaves of cotton plants; fully grown larvae feed all over the plant. The Egyptian cottonworm has been known to reduce cotton yield as much as 75 percent.

WATCH FOR NEW COTTON INSECTS

HELP US find insects that slip past our quarantine barrier and attack cotton.

Plant quarantine inspectors watch for destructive insects at seaports, international airports, and border crossings. They intercept thousands of insects each year. But, some insect pests slip past our quarantine barrier. These are the insects that we want you to help us find.

If we find destructive insects early, before they become numerous, we can keep them in a small area and control them. We may even be able to get rid of them.

Read the descriptions of insects that threaten cotton, and

study the illustrations.

If you find insects or damage like that described here, or that you do not recognize, call your county agricultural agent or your local, State, or Federal plant pest control official.

These cotton insects are widely distributed in areas of the world that ship large quantities of products to the United States. If any of these insects were to enter the United States and become established here, the resulting loss in cotton—and in the cost of control measures—could be tremendous.

Help us protect your cotton crop from foreign insect attack. Watch for new cotton insects.



LEAF THRIPS

Leaf thrips (*Caliothrips impurus*) are tiny insects about $\frac{1}{25}$ inch long. The adult is blackish brown. Nymphs resemble the adults but are wingless and are light brown. The life cycle of leaf thrips requires 2 to 5 weeks, depending on the time of year.

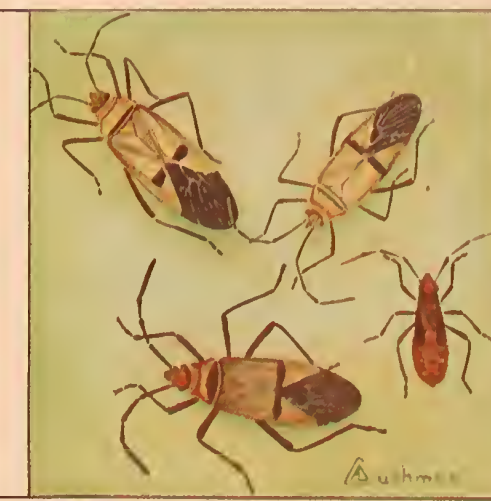
Damage: Both the adults and nymphs suck sap from the underside of leaves of cotton plants. The upperside of older leaves turns brown, and the underside becomes silvery and is dotted with black. Leaves then fall and, in severe cases, lower branches die and bolls open prematurely.

COTTON STAINERS

Cotton stainers are large colorful bugs that feed on ripening seeds and spoil the lint. The adult of *Dysdercus nigrofasciatus* is about $\frac{1}{2}$ inch long. Its head is usually reddish and has a white collar behind it. A black spot or band is prominent on its back. Legs and antennae are dark red and have black tips.

The life cycle of some species takes 3 months or more.

Damage: Young nymphs feed on ripe or decaying seeds. Older nymphs and adults attack seeds of unopened bolls. Cotton stainers deform the plants, spoil the lint, and cause bolls to decay or shed.





HELP KEEP PERCY PEST OUT OF COTTON

Drawings of insects furnished through the courtesy of Hercules Incorporated.

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